WE CLAIM:

1. A method for preparing a catalyst comprising a zeolite and a low acidity refractory oxide binder which is essentially free of alumina comprising:

(a) preparing an extrudable mass comprising a substantially homogenous mixture of zeolite, water, a source of the low acidity refractory oxide binder present which comprises an acid sol, and an amine compound,

(b) extruding the extrudable mass resulting from step (a),

(c) drying the extrudate resulting from step (b); and,

(d) calcining the dried extrudate resulting from step (c).

2. The method of claim 1 wherein step (a) is performed by first mixing the zeolite and the acid sol into a first homogeneous mixture and subsequently adding the amine compound to the first homogeneous mixture such that the pH of the resulting second mixture is raised from below 7 to a value of above 8.

3. The method of claim 2 wherein the amine compound is added in step (a) within 20 minutes of performing step (b).

4. The method of claim 1 wherein the zeolite content, on a dry basis, is below 50 wt% as calculated on the finished catalyst and wherein the low acidity refractory oxide source used to prepare the extrudable mass in step (a) further comprises a powder of the low oxide refractory source.

5. The method of claim 1 wherein the low acidity refractory oxide binder is silica.

6. The method of claim 5 wherein the low acidity refractory oxide source used to prepare the extrudable mass in step (a) further comprises a powder of silica.

7. The method of claim 1 wherein the amine compound is ammonia.

8. The method of claim 1 wherein the zeolite is selected from the group consisting of ZSM-5, ZSM-12, ZSM-22, ZSM-23, and SZZ-32.

9. The method wherein the catalyst produced by the method according to claim 1 is subjected to a dealumination treatment.

10. The method according to claim 9 wherein the dealumination treatment is performed by a process in which the zeolite is contacted with an aqueous solution of a fluorosilicate salt wherein the fluorosilicate salt is represented by the formula:

$$(A)_{2/b}SiF_6$$

wherein A is a metallic or non-metallic cation other than H+ having the valence b.

11. The method wherein a catalyst prepared by the method of claim 1 is subjected to a cation exchange treatment wherein a palladium, platinum or nickel metal is loaded on the catalyst.

12. A process for hydroprocessing a hydrocarbon feedstock comprising the steps of contacting said hydrocarbon feedstock with the catalyst produced according to the method of claim 1 at an elevated temperature and pressure optionally in the presence of hydrogen.

13. The process of claim 12 wherein the process is a catalytic dewaxing process.

14. The process of claim 12 wherein the process is a xylene isomerization process.

15. A hydroprocessing catalyst comprising a zeolite and a low acidity refractory oxide binder which is essentially free of alumina produced by the process of claim 1.

16. The hydroprocessing catalyst of claim 15 comprising a zeolite, a low acidity refractory binder which is essentially free of alumina and at least one Group VIII metal cation.